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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/325,910	06/04/1999	KEITH E. MOORE	10990146-1	3440

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EXAMINER

SINGH, RACHNA

ART UNIT	PAPER NUMBER
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2176

DATE MAILED: 04/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/325,910

Applicant(s)

MOORE, KEITH E.

Examiner

Rachna Singh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to communications: application, filed 6/4/99; after-final amendment filed 3/11/03.
2. Claims 1-20 are pending in the case. Claims 1, 7, and 13 are independent claims.

Response to Arguments

3. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5, 7-8, and 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cass, US Patent 5,692,073, 11/25/97.

In reference to claim 1, Cass teaches a method in which a processor is provided with first and second document images where the first image represents an instance of a reference document to which instance a mark has been added. See column 1, lines 37-67 through column 4, lines 1-17. Cass's method comprises the following:

-A reference document that has an associated set of active elements. The active elements are associated with at least one action. The active elements in the document is obtained and made available to the processor. The reference document serves as

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the original document image without the mark. See columns 1-2. Compare to ***“storing a first communication as data in a database, the storing utilizing software configured to save an identifier code associated with the first communication data in the database; associating at least a portion of the first communication together with the identifier code on a substrate.”***

-Storing a first document image comprising digital image data in a database. See column 1-2. The first image represents an instance of a reference document to which a mark has been added. Compare to ***“changing the first communication on the substrate to form a second communication which is different from the first communication.”***

-Scanning a hardcopy instance of the first document to produce an instance of a reference hypertext document to which instance a mark has been added. Interpreting any active elements indicated in the document. See columns 3-4 and abstract. Compare to ***“scanning the second communication and the identifier code with a scanning machine to digitize the second communication and the identifier code.”***

-Storing the marked document in a database. See column 8, lines 20-29.

-Providing the processor with a set of active elements for the reference (unmarked) document and extracting from the marked image a set of pixels representing the mark. The processor interprets the extracted set of pixels representing the mark by determining whether the mark indicates any of the active elements of the reference document. Performing a reference-based mark extraction technique in which the unmarked document serves as a reference image and in which substantially the entirety

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of the marked document image is compared with substantially the entirety of the unmarked document does this. See column 3-4. Compare to ***“extracting information from the digitized identifier code with a processor . . . comparing the digitized second communication with the data of the first communication to identify differences between the second communication and the first communication”***.

Cass's system utilizes active elements within the reference (unmarked) document as a way of identifying if a mark on the other document. Cass teaches that typically paper-based systems utilize an identification number that uniquely corresponds to a particular type of form being used or specially coded information, such as a pattern of data glyphs or a bar code, included in the form is transmitted with the image. The computer can be programmed to seek coded information at the location within the received image and use the coded information together with additional information to identify what kind of form has been sent and to determine what is to be done in response to the boxes checked by the user. Cass goes on to teach a new approach of using active elements to identify specially coded information that is unlimited in appearance and layout of forms they support. Cass teaches using an identifier in the form of an active element to describe different portions of the document thus it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize identifier codes as suggested by Cass.

In reference to claim 2, Cass teaches making a mark on the reference document to form a second marked document. See columns 3-4.

In reference to claim 3, Cass teaches producing a difference document in which the differences between the reference document and the marked document are outputted. See column 13, lines 65-67 and column 14 lines 1-7. See also figures 10-12.

In reference to claim 4, Cass teaches producing a difference document in which the differences between the reference document and the marked document are outputted. See column 13, lines 65-67 and column 14 lines 1-7. See also figures 10-12.

In reference to claim 5, Cass teaches using a scanner to digitize the document and send it to the processor. While Cass does not explicitly state using a hand-held scanner, it was well known in the art at the time of the invention to utilize hand-held scanners as a means for digitizing documents. See column 7, lines 61-67 and column 8, lines 1-11.

In reference to claim 7, Cass teaches storing multiple document instances in a database. See column 8, lines 20-29. Each image has a marked document instance which consists of references to active elements. Similar documents are indexed together. Cass further teaches that if the document is coded with a machine-readable code such as a data glyph or barcode, the machine-readable code can be used as the index of the document. See column 11, lines 20-26. Compare to ***“providing a database having multiple versions . . . having different version specific codes”***.

Cass teaches that an image of a marked document can be produced in a hardcopy document. The document can be coded with a machine-readable code such

as a barcode that is used to index the document. See column 8, lines 20-29 and column 11, lines 20-26. Compare to ***“forming a hard copy. . .having the version specific code provided thereon in machine-readable format.”***

Cass further teaches that the machine-readable code is used to retrieve the appropriate reference document from the collection of documents given a marked document instance. The machine-readable format is read using a code-reading machine such as a scanner or fax machine. He teaches providing the processor with a set of active elements for the reference (unmarked) document and extracting from the marked image a set of pixels representing the mark. The processor interprets the extracted set of pixels representing the mark by determining whether the mark indicates any of the active elements of the reference document. Performing a reference-based mark extraction technique in which the unmarked document serves as a reference image and in which substantially the entirety of the marked document image is compared with substantially the entirety of the unmarked document does this. See column 3-4. Compare to ***“reading the machine-readable format. . .providing the document specific code and version specific code. . .wherein the second version is different than the first version.”***

Cass's system utilizes active elements within the reference (unmarked) document as a way of identifying if a mark on the other document. Cass teaches that typically paper-based systems utilize an identification number that uniquely corresponds to a particular type of form being used or specially coded information, such as a pattern of data glyphs or a bar code, included in the form is transmitted with the image. The

computer can be programmed to seek coded information at the location within the received image and use the coded information together with additional information to identify what kind of form has been sent and to determine what is to be done in response to the boxes checked by the user. Cass goes on to teach a new approach of using active elements to identify specially coded information that is unlimited in appearance and layout of forms they support. Cass teaches using an identifier in the form of an active element to describe different portions of the document thus it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize identifier codes as suggested by Cass.

In reference to claim 8, Cass teaches producing a difference document that shows the differences between the two versions of the document. See figures 10-12.

In reference to claim 11, Cass teaches using active elements. A reference document has an associated set of active elements. The active elements are associated with at least one action. The active elements in the document is obtained and made available to the processor. Upon receiving a marked document instance, the document is indexed into the stored document collection. The image is then retrieved and the active elements are extracted (using mark extraction). The extracted marks are interpreted according to the nearby active elements. Cass teaches that an image of a marked document can be produced in a hardcopy document. The document can be coded with a machine-readable code such as a barcode that is used to index the document. See column 8, lines 20-29 and column 11, lines 20-26. Cass teaches that typically paper-based systems utilize an identification number that uniquely corresponds

to a particular type of form being used or specially coded information, such as a pattern of data glyphs or a bar code, included in the form is transmitted with the image. The computer can be programmed to seek coded information at the location within the received image and use the coded information together with additional information to identify what kind of form has been sent and to determine what is to be done in response to the boxes checked by the user. Cass goes on to teach a new approach of using active elements to identify specially coded information that is unlimited in appearance and layout of forms they support. See column 2. Cass teaches using an identifier in the form of an active element to describe different portions of the document (compare to ***“hard copy has some component-identifying codes. . . machine-readable code of the component-identifying codes on the hard copy is read by the code-reading machine”***). Since Cass teaches versioning documents based on the encoded active elements that determine variations in common documents, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize different component-identifying codes to identify sub-components and versions of the subcomponents.

In reference to claim 13, Cass teaches storing multiple document instances in a database. See column 8, lines 20-29. Each image has a marked document instance which consists of references to active elements. Similar documents are indexed together. Cass further teaches that if the document is coded with a machine-readable code such as a data glyph or barcode, the machine-readable code can be used as the

index of the document. See column 11, lines 20-26. Compare to ***“storing multiple versions of a communication in a database”***.

Cass teaches storing a reference document (unmarked document) in the database. He also teaches storing a marked document image comprising digital image data in a database. See column 1-2. The first image represents an instance of a reference document to which a mark has been added. See column 8, lines 20-29. Compare to ***“saving the first version of the communication. . .fetching the first version of the communication. . .changing at least a portion of the first version to form a second version. . .saving the second version . . .identifier code associated with the second version of the communication”***.

Cass further teaches providing the processor with a set of active elements for the reference (unmarked) document and extracting from the marked image a set of pixels representing the mark. The processor interprets the extracted set of pixels representing the mark by determining whether the mark indicates any of the active elements of the reference document. Performing a reference-based mark extraction technique in which the unmarked document serves as a reference image and in which substantially the entirety of the marked document image is compared with substantially the entirety of the unmarked document does this. See column 3-4. Compare to ***“retrieving a selected one of the first and second versions. . .providing the published first identifier code. . .compare the first and second data sets”***././././

In reference to claim 14, Cass teaches that typically paper-based systems utilize an identification number that uniquely corresponds to a particular type of form being

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used or specially coded information, such as a pattern of data glyphs or a bar code, included in the form is transmitted with the image. The computer can be programmed to seek coded information at the location within the received image and use the coded information together with additional information to identify what kind of form has been sent and to determine what is to be done in response to the boxes checked by the user. Cass goes on to teach a new approach of using active elements to identify specially coded information that is unlimited in appearance and layout of forms they support. See column 2. Cass teaches using an identifier in the form of an active element to describe different portions of the document.

In reference to claims 15 and 17, Cass teaches that typically paper-based systems utilize an identification number that uniquely corresponds to a particular type of form being used or specially coded information, such as a pattern of data glyphs or a bar code, included in the form is transmitted with the image. The computer can be programmed to seek coded information at the location within the received image and use the coded information together with additional information to identify what kind of form has been sent and to determine what is to be done in response to the boxes checked by the user. Cass goes on to teach a new approach of using active elements to identify specially coded information that is unlimited in appearance and layout of forms they support. See column 2. Cass teaches using an identifier in the form of an active element to describe different portions of the document. Upon receiving the marked up document, Cass compares the first and second document to produce a

difference document that indicates the differences in various sub-components in the documents. See figures 10-12.

In reference to claim 16, Cass teaches providing a scanned machine-readable code input to the processor.

In reference to claim 18, Cass teaches making hard copies of the documents. See column 8, lines 20-29 and column 11, lines 20-26.

In reference to claim 19, Cass teaches using active elements. A reference document has an associated set of active elements. The active elements are associated with at least one action. The active elements in the document is obtained and made available to the processor. Upon receiving a marked document instance, the document is indexed into the stored document collection. The image is then retrieved and the active elements are extracted (using mark extraction). The extracted marks are interpreted according to the nearby active elements. Cass teaches that an image of a marked document can be produced in a hardcopy document. The document can be coded with a machine-readable code such as a barcode that is used to index the document. See column 8, lines 20-29 and column 11, lines 20-26. Cass teaches that typically paper-based systems utilize an identification number that uniquely corresponds to a particular type of form being used or specially coded information, such as a pattern of data glyphs or a bar code, included in the form is transmitted with the image. The computer can be programmed to seek coded information at the location within the received image and use the coded information together with additional information to identify what kind of form has been sent and to determine what is to be done in

response to the boxes checked by the user. Cass goes on to teach a new approach of using active elements to identify specially coded information that is unlimited in appearance and layout of forms they support. See column 2. Cass teaches using an identifier in the form of an active element to describe different portions of the document. Since Cass teaches versioning documents based on the encoded active elements that determine variations in common documents, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize different component-identifying codes to identify sub-components and versions of the subcomponents.

In reference to claim 10, 12, and 20, Cass teaches presenting an index of versions of similar documents to the user. Through the use of active elements, the user is able to indicate which portions require some sort of action including extraction from a database. See column 8.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cass, US Patent 5,692,073, 11/25/97 in view of Belucci et al., US Patent 5,913,542, 6/22/99 and Outwater et al., US Patent 6,203,069, 3/20/01.

In reference to claim 6, Cass does not teach having a pattern which is either camouflaged or invisible to users for the identifier code; however, Belucci discloses a system in which the identification indicia are camouflaged. See figure 1B. Furthermore, Outwater discloses a system in which the label has an invisible bar code that is invisible under certain light. See abstract. Since such features for data protection was well known and the art and it was common at the time of the invention to utilize such

protection when using identifiers, it would have been obvious to incorporate these features in the system of Cass.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cass, US Patent 5,692,073, 11/25/97 in view of Edens et al., US Patent 6,249,716, 6/19/01.

In reference to claim 9, Edens teaches a system for printing and finishing documents. Specifying the finishing and printing operations for a hard copy document is well known in the art of book printing. See columns 1-3. Since it was common to utilize such features in document processing, it would have been obvious to implement these features in the system of Cass that produces hard copy documents.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 6,327,599	Warmus et al.	12/4/01
US Patent 6,104,834	Hull	8/15/00
US Patent 4,985,930	Takeda et al.	1/15/91
US Patent 6,192,165	Irons	2/20/01
US Patent 5,806,078	Hug et al.	9/8/98.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachna Singh at 703.305.1952. The examiner can normally be reached on Monday-Friday from 8:00AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon, can be reached at 703.308.5186.

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Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is 703.305.3900.

Any response to this action should be mailed to:

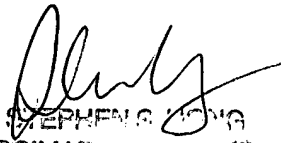
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or faxed to:

After-Final	703.746.7238
Official	703.746.7239
Non-Official/Draft	703.746.7240

Hand-Delivered responses should be brought to Crystal park II, 2121 Crystal Drive, Arlington VA., Sixth Floor (Receptionist).

Rachna Singh
March 28, 2003



STEPHEN G. SINGH
PATENT ATTORNEY